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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/812,070

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Takayuki Yamaguchi

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EXAMINER

KEMMERLE III, RUSSELL J

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

03/03/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/812,070	Applicant(s) YAMAGUCHI ET AL.	
	Examiner RUSSELL J. KEMMERLE III	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 17-23 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-23 and 26-31 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 5 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1-4, 6, 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otagawa (US Patent 4,982,486) in view of Webster (US Patent 6,260,395).

Otagawa discloses a method of making a resin molding for use on vehicles. Otagawa discloses that the process involves extruding a resin body through known techniques (including the use of a sizer), followed by allowing the resin to at least partially harden, and performing an axial bend (Col 3 line 42 – Col 4 line 20).

Otagawa does not disclose that the axial bending is performed by gripping the resin molding in a bending apparatus and changing a position of the gripping portion to a position not along the constant extrusion direction.

Webster discloses a method of bending a workpiece where the workpiece is gripped in a bend die which is rotatable moved about a pivot axis causing the workpiece to bend (that is, the position of the bend die is changed to a position not along the extrusion direction) (Col 7 lines 18-33, compare Fig 2 with Fig 3, and Fig 6 with Fig 7). Since the position of the bend die (and how far it is rotated) would determine the radius of curvature of the workpiece, this process controls the radius of the curvature of the work piece.

The degree of the radius of curvature is controlled by the position and movement of the tube contacting die and pressure applicator to be the radius defined with the bend

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die or an infinite radius of curvature (a straight line). Applicants have explicitly stated that they consider the term “radius of curvature” to include the infinite radius (a straight piece) (current specification, page 17, lines 22-24).

Referring to claims 2 and 3, the molding would have to be bent while at an elevated temperature in order for the bending to result in a final piece having such a bend, as is known to those in the art. If this were done using residual heat from the molding process (that is, while it is cooling, as appears to be the case in Otagawa since it is not stated that the molding is cooled and reheated during the recited processing steps) this would result in the temperature inside being higher than the temperature on the surface (since the molding would cool from the outside inward).

Referring to claim 4, the bent molding of Otagawa has a radius of curvature that is different at different points of the molding (as shown in Fig 2).

Referring to claim 6, Otagawa discloses that after bending the body is water cooled during sizing (i.e., compulsory cooled) (Col 4 lines 50-55).

Referring to claim 8, Otagawa discloses that the molding be cut to length then bent. However, it would have been obvious to one of ordinary skill in the art that the selection of any order of these steps could have been effective, absent a showing of unexpected results. This would have been obvious because it appears that each step performs the same function in Otagawa and in the current invention, and that the performance of that step is not dependant on the other step being performed first. Specifically the bent body could be cut to size in the same manner that an uncut body could be, and a cut body could be bent in the same way as an uncut body. See *In re*

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Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results).

Referring to claim 9, while the specific action performed by the bender in Otagawa is not disclosed, it would have necessarily had to have performed at least two of the steps recited in claim 9 to achieve the product shown in Fig 2. This is because if at least two of these steps are not performed the piece depicted in the figure could not have been made having such a shape while maintaining the constant angle of the cross section as is shown.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otagawa in view of Webster as applied above to claim 1, and further in view of Uchimura (US Patent 6,739,599).

Otagawa and Webster are relied upon as discussed above, but does not disclose performing an axial twisting process on the resin molding.

Uchimura discloses a method of making a resin molding substantially similar to that of Otagawa, also for use as weather stripping on a vehicle. Uchimura further discloses that the molding be subjected to a twisting and flexing (bending) step in order to ensure a proper fit on the vehicle.

It would have been obvious to one of ordinary skill in the art, at the time of invention by Applicant, to have modified the teaching of Otagawa in view of Webster by also performing an axial twist on the molding to ensure that the molding fit properly on the vehicle.

Allowable Subject Matter

Claims 17-23 and 26-31 are allowed.

Claims 5 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 17 and 26 both require passing the molded member through an extrusion die after it has undergone a bending process. As Applicants have pointed out, a bent piece, such as that of Otagawa, could not normally be passed through a static extrusion molding die. As there is nothing in the record to show passing such a bent piece through an extrusion die, claims 17 and 26 are allowed.

Claims 18-23 and 27-31 are allowed based on their dependence from claims 17 and 26, respectively.

Referring to claim 5, the prior art of record fails to disclose the combination of a force being applied after the sizing equipment and also after the gripping portion which acts as a pulling force from the sizing channel and a pushing force to the gripping portion.

Referring to claim 7, the prior art of record fails to disclose that the resin contain as a main component crystalline resin and that due to the solidification process as recited in claim 7 results in the outer surface having a lower degree of crystallinity than the inside.

Response to Arguments

Applicant's arguments filed 30 October 2009 have been fully considered but they are not persuasive.

Applicants argue that Webster fails to teach "controlling a degree of a radius of curvature of a bend...by changing a position of the gripping portion to a position not along the constant extrusion direction". Applicants argue that the movement of the pressure applicator and tube contacting die of Webster does not control the degree of the radius of curvature of the bend in the workpiece, but rather the radius of curvature is controlled by the bend die.

This is not found to be persuasive since the position of the tube contacting apparatus of Webster, in combination with the bend die, controls what the radius of curvature of the workpiece will be. When a bending operation is being performed, the radius of the bend is controlled primarily by the bend die in Webster. However, if a bending operation is being performed or not is controlled almost entirely by the position of the tube contacting and pressure application. Therefore the degree of the radius of curvature is controlled by the position and movement of the tube contacting die and pressure applicator to be the radius defined with the bend die or an infinite radius of curvature (a straight line). Applicants have explicitly stated that they consider the term "radius of curvature" to include the infinite radius (a straight piece) (current specification, page 17, lines 22-24).

Applicant's arguments, filed 30 October 2009, with respect to claims 17-23 (also applied to similar limitations in claims 26-31) have been fully considered and are

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persuasive. The rejection of these claims has been withdrawn (see allowable subject matter above).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RUSSELL J. KEMMERLE III whose telephone number is (571)272-6509. The examiner can normally be reached on Monday through Thursday, 7:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. J. K./
Examiner, Art Unit 1791

/Eric Hug/
Primary Examiner, Art Unit 1791